

CAPITAL FACILTIES ELEMENT

2005 to 2010

GOAL

Develop and implement the capital facilities plan for the City of Renton.

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CAPITAL USE FACILITIES

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Purpose

The purpose of the Capital Facilities Plan is:

- to identify the new or expanded public facilities that will be needed to accommodate --at an established level of service--the growth projected to occur within the City of Renton in the first six years of the Comprehensive Plan; and
- to identify the sources of public financing for these public facilities.

Methods and Process

The Capital Facilities Plan relies heavily on the analyses and policies presented in the other seven elements of the Comprehensive Plan as well as in the Fire Department Master Plan, Comprehensive Park, Recreation and Open Space Plan, Long Range Wastewater Management Plan, Annual Capital Improvements Plan. For detailed information and explanations concerning growth projections, land use determinations, existing facilities, level of service, etc., the reader must consult these documents. The Capital Facilities Plan incorporates by reference the information and analyses presented in these other documents and the annual updates to these plans concerning existing facilities and level of service standards.

Based on these other documents, the Capital Facilities Plan establishes policies for determining which public facilities should be built and how they should be paid for, and presents a six-year plan for the use of public funds toward building and funding the needed capital facilities. The process for arriving at the six-year plan involved identifying existing facilities and level of service standards and then applying the projected growth in residential population and employment to identify the needed capital facilities. The timing of the facilities was established through a combination of the requirements of the city's concurrency policy and the length of time it takes to implement the needed facility.

Type and Providers of Capital Facilities

For the purposes of complying with the requirements of the GMA, the Capital Facilities Plan proposes a six-year plan for the following capital facilities and providers:

transportation	City of Renton
domestic water	City of Renton
sanitary sewer	City of Renton
surface water	City of Renton
parks facilities	City of Renton
fire	City of Renton
police	City of Renton
economic development	City of Renton

GROWTH MANAGEMENT ACT

REQUIREMENTS

Passed by the legislature in 1990, the Growth Management Act establishes planning goals as well as specific content requirements to guide local jurisdictions in the development and adoption of comprehensive plans.

One of the thirteen planning goals stated in the Act is to:

Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards. (RCW 36.70A.020(12))

To this end, the Act requires that each comprehensive plan contains:

A capital facilities plan element consisting of: (a) An inventory of existing capital facilities owned by public entities, showing the locations and capacities of the capital facilities; (b) a forecast of the future needs for such capital facilities; (c) the proposed locations and capacities of expanded or new capital facilities; (d) at least a six-year plan that will finance such capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes; and (e) a requirement to reassess the land use element if probable funding falls short of meeting existing needs and to ensure that the land use element, capital facilities plan element, and financing plan within the capital facilities plan element are coordinated and consistent. (RCW 36.70A.070(3))

With respect to transportation facilities, the Act is more specific, requiring that:

...transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development and defining "concurrent with development" to mean "that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years." (RCW 36.70A.070(6))

The Act also requires that:

...cities shall perform their activities and make capital budget decisions in conformity with their comprehensive plans. (RCW 36.70A.120)

Administrative Regulations (WAC 365-195)

In support of the GMA legislation, state administrative regulations require that the Capital Facilities Plan consist of at least the following features (WAC 365-195-315(1)):

1. An inventory of existing capital facilities owned by public entities, showing the locations and capacities of the capital facilities.
2. A forecast of the future needs for such capital facilities.
3. The proposed locations and capacities of expanded or new capital facilities.
4. At least a six-year plan that will finance such capital facilities within projected funding capacities and clearly identifies sources of public money for such purposes.
5. A reassessment of the land use element if probable funding falls short of meeting existing needs...

In the administrative regulations, the state recommends that in addition to transportation, concurrency should be sought for domestic water and sanitary sewer systems. (WAC 365-195-060(3))

Additionally, the regulations state that the planning for all elements, including the Capital Facilities Plan, should be undertaken with the goal of economic development in mind even though the Act does not mandate an economic development element for the plan. (WAC 365-195-060(2))

GROWTH PROJECTIONS

The Puget Sound Regional Council population and employment forecast growth for the City over the twenty-one-year interval from 2001 to 2022 is an increase of 9,723 households, and 33,600 jobs. Growth targets adopted by the Growth Management Planning Council anticipate 6,198 households and 27,597 jobs. Both forecast growth and targets are well within the City's estimated land capacity of 11,261 units and 32,240 jobs established through the Buildable Lands requirements of the Growth Management Act (GMA). Renton is planning for its regional share of forecast growth over the next 20 years at the high end of the range, and the adopted target at the low end of the range. In the first 9 years of growth management actual growth in Renton exceeded targets, but was within the range predicted by the forecast growth assumptions. With external factors, including the regional economy, state/federal transportation funding and the GMA regulatory environment remaining constant or improving, Renton's growth is anticipated to continue over the next 6 year planning cycle.

The following chart summarizes Renton's forecast growth, targets and land use capacity.

	Incorporated Renton 2001-2022 (21yrs)	Adjusted Target/Capacity Reflecting Growth/Annexation/Land Use Changes in 2001 and 2002	Capital Facilities Plan Planning Incorporated Renton 2005-2010	Annualized Estimate
Forecast Growth	9,723 units 33,600 jobs 22,266 population*	None	2,778 units 9,600 jobs	463 units 1,600 jobs (21 yrs)
Growth Targets	6,198 units 27,597 jobs 14,194 population*	4,523 units 26,736 jobs	1,428 units 8,442 jobs	238 units 1,407 jobs (19 yrs adjusted for remaining target)
Capacity established by Buildable Lands	11,261 units 32,240 jobs* 25,788 population*	9,634 units 30,699 jobs	NA	NA

* Additional zoned capacity established for the Urban Center-North through the Boeing Comprehensive Plan Amendments in 2003 of 10,600,000 square feet of employment uses, 360 hotel rooms, and 3,225 units is not yet incorporated into the Buildable Lands data base. However, transportation infrastructure planning for the Urban Center-North is included in the next 6-year planning cycle for the Capital Facilities Element and will be reflected in the Transportation section of this Element. Population increase estimates are based on a household size of 2.29.

For the purpose of developing a six-year capital facilities plan for the period from 2005 through 2010, an estimate was made as to the amount of the remaining 21-year growth to be realized during the six-year Capital Facilities Element planning cycle. After reviewing the projections and the underlying assumptions, it was determined that for planning purposes, the most prudent course was to assume a uniform allocation of the forecast growth and targets over the 21-year period, rather than trying to predict year by year economic cycles.

Renton's growth over the first years of growth management is occurring more rapidly than originally forecast. The estimate for 2001 was 48,456 persons however the actual population by April 1, 2001 was 51,140, exceeding forecast growth by 2,684 persons housed in 1,177 housing units over a 6 year period (196 units per year). By April 1, 2004, the City population was 55,360, representing an increase of another 4,220 residents and an estimated 1,850 units. The number of units realized between 2002 and 2004 exceeds the forecast projection of 1,389 units by 461 units (153 units per year). Some of this development can be explained by new housing developed in areas annexing to the City. However, the increase exceeds the proportional share of housing target and forecast growth assigned to this annexation area and assumed by the City upon annexation.

For the purposes of the next phase of the planning cycle, the 2005 to 2010 six-year Capital Facilities Plan, Renton will continue plan for the next six-year increment of forecast growth assuming an increase of 2,778 units and 9,600 jobs. Forecast growth represents the upper end of expected growth, while the target of 1,356 units and 8,022 jobs represented the minimum amount of growth expected for this period. The City's population in the year 2010 is forecast as 61,694 persons.

To be sure, growth will not occur precisely as projected over the next six-year or the 21-year period. Recognizing this fact, the Capital Facilities Plan should be updated at least biennially. In this way local governments have the opportunity to re-evaluate their forecasts in light of the actual growth experienced, revise their forecasts for the next six years if necessary, and adjust the number and timing of capital facilities that would be needed during the ensuing six-year period. The City performed such a review of the Capital Facilities Plan in 2004 and determined that there was not a need to adjust the growth forecast or the number and timing of capital facilities. This conclusion was based on a finding that although actual growth was higher than forecast, the level of service standards were being maintained. Subsequent reviews may result in revisions to the growth projections and the number and timing of capital facilities if actual growth continues to exceed the forecast growth.

As stated in Policy CFP-1, this Capital Facilities Plan is anticipated to be updated regularly as part of the city's budget process, thereby ensuring that the Plan reflects the most current actual statistics related to growth in Renton, and that capital facilities are slated for implementation in accordance with both the level of service standards and the city's concurrency policy. It is anticipated that the City will fully implement this policy (CFP-1) in the annual budget process.

CAPITAL FACILITIES PLAN POLICIES

Policy CFP-1. The Capital Facilities Plan should be updated on a regular basis as part of the city's budget process, and such update may include adjustments to growth projections for the ensuing six years, to level of service standards, to the list of needed facilities, or to anticipated funding sources. For the purpose of capital facilities planning, plan for forecast growth at the high end of the projected range and targeted growth as a minimum.

Policy CFP-2. Level of service standards should be maintained at the current or at a greater level of service for existing facilities within the City of Renton, which the City has control over.

Policy CFP-3. Adequate public capital facilities should be in place concurrent with development. Concurrent with development shall mean the existence of adequate facilities, strategies or services when development occurs or the existence of a financial commitment to provide adequate facilities, strategies, or services within six years of when development occurs.

Policy CFP-4. No deterioration of existing levels of service that the City of Renton has control over should occur due to growth, consistent with Policy CFP-3.

Policy CFP-5. Funding for new, improved or expanded public facilities or services should come from a mix of sources in order to distribute the cost of such facilities or services according to use, need, and adopted goals and policies.

Policy CFP-6. Evaluate levying impact fees on development for municipal services and/or school district services upon the request of the district, if a compelling need is established through means such as presentation of an adopted Capital Facilities Plan and demonstration that such facilities are needed to accommodate projected growth and equitably distributed throughout the district.

(See the Public Facilities and Annexation Sections of the Land Use Element, the Parks, Recreation Trails and Open Space Element, the Utilities Element, and the Transportation Elements for policies related to this Capital Facilities Plan.)

TRANSPORTATION CAPITAL FACILITIES PLAN

2005 - 2010

Inventory of Existing Facilities

Figures 7-1, 7-2, and 7-3 on the following pages indicate the degree to which Renton's transportation system is integrally linked to the regional transportation system. The first exhibit is of the existing street and highway system; the second depicts traffic flows on that system in 2002; and, the third depicts daily traffic volumes forecasted for 2022. In Renton perhaps more than in any other jurisdiction in the Puget Sound area, actions relating to the transportation system have local and regional implications.

Level of Service

Background

In recognition of the regional nature of the traffic problems faced by Renton and the basic impossibility of building enough roadway capacity to alleviate traffic congestion, the City of Renton revised its LOS policy in 1995 to emphasize the movement of people, not just vehicles. The LOS policy is based on three premises:

- Level of Service (LOS) in Renton is primarily controlled by regional travel demands that must be solved by regional policies and plans;
- It is neither economically nor environmentally sound to try to accommodate all desired single occupancy vehicle (SOV) travel; and
- The decision-makers for the region must provide alternatives to SOV travel.

Fig. 7-1
Existing Street/Highway System

Figure 7-2
Traffic Flow Map

Fig. 7-3
2022 Daily Traffic Volumes

The LOS policy is based on travel time contours which in turn are based on auto, transit, HOV, non-motorized, and transportation demand management/commute trip reduction measures. The LOS policy is designed to achieve several objectives:

- Allow reasonable development to occur;
- Encourage a regionally linked, locally oriented, dynamic transportation system;
- Meet requirements of the Growth Management Act;
- Meet the requirements of the Countywide Planning Policies Level of Service Framework Policies;
- Require developers to pay a fair share of transportation costs; and
- Provide flexibility for Renton to adjust its LOS policy if the region decides to lower regional LOS standards by not providing regional facilities.

The City of Renton LOS standard is used to evaluate Renton citywide transportation plans. The auto, HOV, and transit measures are based on travel times and distance and are the primary indicators for concurrency. The non-motorized and TDM measures assist in meeting multi-modal goals of Renton and the region.

The Level of Service Standard Methodology

The following table demonstrates how the LOS policy is applied. A 2002 LOS travel time index has been calculated for the City by establishing the sum of the average 30-minute travel distance for SOV, HOV and Transit as follows:

Average PM peak travel distance in 30 minutes from the city in all directions			
SOV	HOV	2 Transit (includes access time)	LOS Standard
XX miles	XX miles	2 times X miles = XX	XX

City-wide Level of Service Standard (Years 2002 and 2022)

The 2002 LOS index is the basis for the 2022 standard. The average SOV 30-minute travel distance is forecast to decrease by 2022. Therefore, SOV improvements will need to be implemented to raise the SOV equivalent or a combination of HOV and/or transit improvements will need to be implemented to raise the HOV and/or transit equivalents to maintain the LOS standard.

Renton's Transportation Improvement Plan Arterial, HOV and Transit Sub-Elements have been tested against the above LOS standard to assure that the Plan meets the year 2022 standard.

City-wide Level of Service Index (Year 2002):

Average PM peak travel distance in 30 minutes from the city in all directions			
SOV	HOV	2 Transit (includes access time)	LOS Index
16.6 miles	18.7 miles	6.8 miles	42*

*Rounded

NOTE: The 1990 LOS Index of 49 (which was the basis for the 2010 LOS standard) presented in Renton's Comprehensive Plan adopted February 20, 1995 was based on raw travel distance data collected prior to 1994. Subsequently in mid-1995, this raw data was updated using an enhanced Renton (1990-2010) transportation model, which resulted in a 1990 LOS index of 46. A LOS index of 42 has been determined for the year 2002 by the new calibrated (2002-2022) transportation model that reflects 2002 and 2022 land use data. The 2002 LOS index of 42 is shown above, and is the basis for the 2022 LOS standard.

City-wide Level of Service Standard (Year 2022):

Average PM peak travel distance in 30 minutes from the city in all directions			
SOV	HOV	2 Transit (includes access time)	LOS Standard
15 miles	17 miles	10 miles	42

The City of Renton LOS standard is used to evaluate citywide transportation plans. The auto, HOV, and transit measures are based on travel times and distance and are the primary indicators for concurrency. The non-motorized and TDM measures serve as credit toward meeting multi-modal goals of Renton and the region.

To check the progress toward the 2022 goal, each year the city will assess the level of service as a part of its annual Transportation Improvement Plan (TIP). This assessment will further ensure that level of service is maintained for the current period as well as for 2022.

Needed Capital Facilities and Funding Plan, 2005 - 2010

The transportation 6-year facilities plan is based on achieving the desired level of service by the year 2022 through an annual program of consistent and necessary improvements and strategies. Additionally, the plan includes projects such as bridge inspections, street overlay programs, traffic signal maintenance, and safety improvements that are needed as part of the City's annual work program. Projects that promote economic development also are included, as encouraged by the GMA. See Table 7-1 on the following page for the latest adopted 6-year plan.

The first step in developing the 6-year funding plan was to establish a 20-year plan that included arterial, HOV and transit components. This effort resulted in a planning level cost estimate of \$134 million. The cost for arterials and HOV are total costs (or Renton's share of the cost of joint projects with WSDOT and local jurisdictions). The transit costs include only the local match for local feeder system improvements, park and ride lots, signal priority and transit amenities.

Having established a 20-year funding level of \$134 million, an annual funding level of \$6.7 million was established. With this funding level, it is reasonably certain that the desired level of service will be maintained over the intervening years as long as the facilities funded each year are consistent with the 20-year plan and transit and HOV facilities are conscientiously emphasized.

The funding source projections in Table 7-2 are based upon the assumption that: gas tax revenue would continue at no less than \$0.35 million per year; that grant funding would be maintained at \$3.90 million per year; . business license fees would continue at \$1.88 million per year based on the current 85% of the annual revenue generated from this fee that is dedicated to fund transportation improvements; and that \$0.57 million per year from mitigation fees would be maintained. Based on forecasts of total new vehicle trips from development, a mitigation fee of \$75 per trip has been established.

Developers are required to implement site-specific improvements to ensure that on-site and adjacent facility impacts are mitigated, as well as paying their required fees.

Table 7-1
2005 - 2010 Six-Year TIP
Total Project Costs

Table 7-2
2005 - 2010 Six-Year TIP
Summary of Funding Sources

WATER CAPITAL FACILITIES PLAN

2005 - 2010

Inventory of Existing Facilities

Renton's water system provides service to an area of approximately 16 square miles and more than 14,700 customers located in 12 hydraulically-distinct pressure zones. An inventory of the existing capital facilities in the water system is listed in Figure 8-1 and consists of 8 wells and one spring for water supply, eleven booster pump stations, eight reservoirs, water treatment facilities at each source (chlorine and fluoride and corrosion control) and approximately 283 miles of water main in service. In addition, the City maintains one standby well and seven metered connections with the City of Seattle (Cedar River and Bow Lake supply pipelines) for emergency back-up supply. Renton supplies water on a wholesale basis to Lakeridge Bryn-Mawr Water District.

Level of Service

Level of service for Renton's Water Utility is defined by the ability to provide an adequate amount of high quality water to all parts of the distribution system at adequate pressure during peak demand or fire. This ability is determined by the physical condition of the system and the capacity of supply, storage, treatment, pumping and distribution systems. Level of service standards for the water system vary according to the component of the overall system and are determined by the requirements established by local, state, and federal regulations. Water supply is regulated by the Washington State Department of Ecology (water rights), and the Washington State Department of Health (quantity guidelines), water quality is regulated by the U.S. Environmental Protection Agency (Safe Drinking Water Act) and the Washington State Department of Health (primacy over Safe Drinking Water Act), system design and construction requirements are regulated by the Washington State Department of Health.

The Water Utility maintains a hydraulic model of the water system. The model incorporates the pipe size and location, booster pumps, and storage to determine the flow and pressure available in each segment of the distribution system. The Utility can evaluate the impact of a specific development on the system using the model. The Water Utility reviews each development in terms of flow, pressure and water supply required.

The Water Utility's goal is to provide an adequate supply of potable water under the "worst case" scenario. This scenario considers the following conditions: failure of the largest source of supply, failure of the largest mechanical component, power failure to a single power grid, and/or a reservoir out of service. Under this scenario, the Water Utility strives to meet the following primary requirements:

Pressure: Maintain a minimum of 30 pounds per square inch (psi) at the meter during normal demand conditions and a minimum of 20 psi during an emergency. Maximum allowable pressure at the meter during normal demand is 130 psi and a maximum of 150 psi during an emergency

Velocity: Under normal demand conditions, the velocity in a transmission main is less than 4 feet per second (fps) and less than 8 fps during an emergency.

Supply: The water supply must meet the maximum day demand and replenish storage within 72 hours with the largest source of supply out of service.

Storage: Storage volume must be maintained to provide for peak demand and adequate volume for an emergency (fire).

Transmission and Distribution: The Water Utility uses design criteria approved by the Washington State Department of Health.

Treatment and Monitoring: The Water Utility treats all sources with chlorine and fluoride and corrosion control. Water quality monitoring is conducted as required by the State Department of Health under the Safe Drinking Water Act. The City implements a cross connection control program to prevent cross connections with non potable sources and a wellhead protection program.

Fire Flow: Fire flow required by a development is as established in the fire code and can vary from 1000 gallons per minute to 5500 gallons per minute.

Needed Capital Facilities and Funding Plan, 2005 - 2010

Based on the projected growth in population and employment by the year 2010, the existing supply of water will meet the level of service standard. As Table 8-1 indicates, with the addition of Wells 11, 12 and 17, the net capacity of the system is 27.07 million gallons per day, which is adequate to meet the City's anticipated growth and maximum day demand for water to at least 2020. Meeting the current fire flow level of service standards will require improvements to the existing water system if the projected commercial and industrial growth occurs. In general, fire flow is adequate to all single family and multi-family areas with the possible exception of portions of downtown, depending on the extent of new multi-family development and the type of construction. Certain areas slated for commercial and industrial growth will need upgrading of the system.

Other improvements to the water system will be needed during the first six years of the Comprehensive Plan because of regulatory requirements relating to water quality and efforts to maintain the existing system at the desired level of service.

The list of growth-related facilities needed to meet all of the level of service standards and regulatory requirements are in Table 8-2.

The funds for the needed facilities are projected to come from a number of sources, including: water utility rates, connection fees, developer extension agreements, low interest loans from state or federal programs, and grants from state and federal agencies. The projected total revenue from all sources for each of the six years is also shown in Table 8-2.

Table 8-1
On-Line Supply Sources – Existing Water Supply Capacity

Name	Pumping Rate (gpm)	Pumping Rate (mgd)
Springbrook	600	0.86
Well RW-1	2,200	3.17
Well RW-2	2,200	3.17
Well RW-3	2,200	3.17
Well RW-5A	1,400	2.02
Well PW-8	3,500	5.04
Well PW-9	1,200	1.73
Well PW-11	2,500	3.60
Well PW-12	1,500	2.16
Well PW-17	1,500	2.16
TOTAL	18,800 GPM	27.07 MGD

GPM: gallon per minute

MGD: million gallon per day

Total annual water rights are 14,809 acre-feet per year

Table 8-2
Water Capital Facilities
Summary of Water Utilities Capital Improvement Projects
2005 -2010

Figure 2-2
Existing Water System

WASTEWATER CAPITAL FACILITIES PLAN

2005-20010

Inventory of Existing Facilities

Renton's sanitary sewer system consists of about 184 miles of gravity sewers, 23 lift stations with associated force mains, and approximately 3,400 manholes. Wastewater is discharged to regional facilities at over 70 locations within the service area. The locations of Renton's sewer interceptors and lift stations, as well as Metro's sewer lines, are shown in Figure 9-1.

The City's Wastewater Utility serves approximately 13,800 customers, which includes approximately ninety-five percent of the city's population and eighty-five percent of the city's land area. The remaining five percent of the population currently utilizes private, on-site wastewater disposal systems, typically septic system, while the balance of the land area either utilizes private systems or remains undeveloped.

The capacity of the existing facilities is adequate to handle the current demand. The Lake Washington East Basin while currently having sufficient capacity, needs some improvements to its Sunset Interceptor to assure sufficient capacity to accommodate anticipated growth. The West Renton Sub-basin also needs to be further evaluated to determine potential capacity restraints. As part of the Wastewater Utility's update to its Long-Range Wastewater Management Plan scheduled for 2005, a full hydraulic model is being developed to evaluate, system wide, the long term need and timing for upsizing of existing interceptors and the timing for additional interceptors for new portions of our service area.

Level of Service

Level of service for Renton's Wastewater Utility is defined by the ability to move sewage from the point of origin, the customer, to the treating agency, King County, in a safe and efficient manner. This ability is determined by the physical condition of Renton's system and the capacity available in the system. It is the Renton Wastewater Utility's responsibility to maintain the system in a safe condition and monitor the standards for new construction. The Wastewater Utility is also responsible for ensuring that capacity exists in the system prior to new connections or that the capacity is created as part of the new development.

The level of service for Renton's Wastewater Utility is developed through coordination with and subject to the policies, design criteria, and standards used for planning and operating a sanitary sewer system as established by the laws and policies of several agencies. Those agencies, in order by authority, are the Department of Ecology (Criteria for Sewage Works Design), King County (King County Wastewater Treatment Division), and the City of Renton.

The Wastewater Utility has maintained a simple hydraulic model of the sewer system. This model uses the size, type, and slope of the pipes to determine the capacity of the each component (segment) of the system. Because the slope of pipes can change segment to segment and flows may be merging at 'branches' the capacity of the system may change block by block. It is, therefore, not feasible, with our current model, to provide a standard statement on the capacity available in Renton's sewer system. As stated above, the Utility is developing a new hydraulic model that will allow the Utility to perform dynamic analysis on any portion of its interceptor system given any scenario, to determine capacity within the system. The model is also based upon two years worth of wet-weather data that was developed as part of a regional effort by King County. This new tool will give us much greater ability to predict future capacity within our interceptors.

The Wastewater Utility's goal is to have sufficient capacity to handle what the Utility considers the 'worst case scenario'. That is, the amount of waste if everybody was discharging their highest amount at the same time and the system was experiencing the highest amount of inflow and infiltration anticipated.

For existing and projected development Renton uses the following criteria for flow projection:

Average Single Family Domestic Flow	270 gallons per day per unit
Average Multi-Family Domestic Flow	190 gallons per day per unit
Light Industrial	2800 gallons per acre per day
Heavy Industrial	site specific
Commercial	2800 gallons per acre per day
Office	2800 gallons per acre per day
Recreation	300 gallons per acre per day
Public	600 gallons per acre per day
Manufacturing Park	2800 gallons per acre per day
Peak Infiltration (New System)	600 gallons per acre per day
Peak Inflow (New System)	500 gallons per acre per day
Peak Inflow/Infiltration (Existing System)	From Sewer Hydraulic Model
Peaking factor for system average	2.0 X
Depth to Diameter Ratio	0.80 (eight tenths)

The criteria listed above are based upon Table IV-3 of the 1998 Long Range Wastewater Management Plan, with an amendment for actual Inflow and Infiltration values based upon our updated hydraulic model. This criterion is subject to change based upon the latest adopted Long Range Wastewater Management Plan or amendments thereto. These flows are averages used as standards. Actual design flows may vary considerably, depending upon land use. The Wastewater Utility will consider verifiable alternate design flows that may be submitted.

If Renton's sewer system has the capacity to handle the flows projected, based upon the above criteria, or a developer improves the system to provide the capacity, the project achieves concurrence with the Wastewater Utility's level of service.

Needed Capital Facilities and Funding Plan 2005-2010

Based on the forecasted growth in population and employment over the next 20 years, daily wastewater flows are predicted to increase by about 10.5 million gallons per day (mgd.) This increase is expected to impact the entire system, with the greatest impact expected to occur in the East Cedar River Basin and Lake Washington East Basin. In order to maintain the desired level of service and accommodate the projected growth, facility improvements will be needed in the Lake Washington East Basin over the next three years.

Another factor affecting level of service is the age of the existing system. A significant portion of the city's wastewater collection and conveyance system is over fifty years old. Some of these mains cannot be relied upon to provide the desired level of service without major repair and/or replacement. Consequently, the primary component of the six-year facility plan is the repair and replacement of the existing system in order to maintain the current level of service. Some of the geographic areas in which these mains are located will experience more growth than will others, but facility improvements will be needed regardless.

It is currently the policy of the Wastewater Utilities that all parcels connecting to the sewer system pay for their fair share of the system. This is accomplished in a combination of three methods:

1. Local Improvement Districts may be formed with the city installing the sewers using LID bonds encumbering the participating parcels;
2. The Wastewater Utility may front the cost of new sewers and hold Special Assessment Districts against benefiting parcels; and
3. Developers or potential users will front the cost of extending the main with the ability to hold a latecomer agreement against the other parcels that potentially benefit.

Projects that replace and rehabilitate the existing system, as well as operation and maintenance costs, will be funded through rates paid by existing customers. Existing sewer customers will not be required to participate in

Special Assessment District fees, latecomer fees, or local improvement districts unless they redevelop or increase the density on their property.

Table 9-1 below lists the projects needed to meet growth, along with the sources of funds for them for the period 2005-2010, based upon the six-year growth projections and the desired level of wastewater service.

**Table 9-1
Wastewater Capital Facilities
2005-2010**

Wastewater Projects	2005	2006	2007	2008	2009	2010
Sanitary Sewer Main Extensions	2,000	-	-	-	-	-
Total						

Sources of Funds:

Oper. Rev/Bonds	2,000					
Licenses and Fees						
Other Taxes						
Grants						
Loans						
Not Funded						
Total	2,000	-	-	-	-	-

Fig. 9-1
Sanitary Sewer Trunk Lines

SURFACE WATER UTILITY CAPITAL FACILITIES PLAN

2005-2010

Inventory of Existing Facilities

The City of Renton is composed of various drainage basins and sub-basins. The major basins within the existing City limits include the East Lake Washington, West Lake Washington, May Creek, Lower Cedar River and Black River basins. The City of Renton is located at the outlet end of a majority of these basins that discharge into either the Green/Duwamish River or into Lake Washington.

The Surface Water Utility's service area within the existing City corporate boundaries is approximately 17.2 square miles. The existing surface water system includes rivers, streams, ditches, swales, lakes, wetlands, detention facilities (pond and piped systems), water quality swales, wetponds, wetvaults, oil/water separators, coalescing plate oil/water separators, pipes, catch basins, manholes, outfalls and pump stations. The natural surface water systems (rivers, streams, lakes and wetlands) are shown on Renton's Critical Area Maps.

A majority of the water quantity and quality facilities are privately owned and maintained on-site as required in accordance with the Renton Storm and Surface Water Drainage Ordinance (RMC Chapter 22, Section 4-22).

The Surface Water Utility owns, maintains and operates all storm and surface water management facilities located within public right-of-ways and easements dedicated for storm and surface water management purposes. The Utility currently owns, operates and maintains approximately 204 miles of storm pipe systems including approximately 8000 catch basin and manhole structures, 19 detention facilities and 37.67 miles of ditch systems. A combination of the public and some of the private storm system is shown in the Surface Water Utility Storm System Inventory Maps and Attributes data base which is too large to present here.

Level of Service

Background

The Surface Water Utility's policies, design criteria, and standards used for planning, engineering, operating and maintaining the storm and surface water systems are based upon requirements that originate from many sources. Together, these regulations define the acceptable level of service for surface water.

The primary Federal, State and local agencies and regulations which affect the City of Renton's level of service standard for surface and storm water systems are listed below:

1. Federal Agencies/Regulations:
 - a. Environmental Protection Agency (EPA):
 - i. Federal Clean Water Act
 - ii. National Pollutant Discharge Elimination System (NPDES) permit
 - b. Army Corps of Engineers (ACOE)
 - i. Nationwide/404 Individual Permit Requirements
 - ii. Federal Emergency Management Act standards

2. State Agencies/Regulations:
 - a. Washington State Department of Ecology (WSDOE):
 - i. Stormwater Discharge Permits (NPDES).
 - ii. Temporary Water Quality Modification Permits
 - iii. Water Quality Certification Permits
 - iv. Coastal Zone Management Consistency Permit
 - v. Shoreline Management Program (SMP)
 - vi. The Puget Sound Water Quality Management Plan
 - vii. 2001 Ecology Stormwater Management Manual for Western Washington
 - b. Washington State Department of Fisheries and Wildlife (WDFW)
 - i. Hydraulic Project Approval Permits
3. Local Agencies/Regulations
 - a. Cedar River Basin Plan
 - b. May Creek Basin Plan
 - c. Green River Basin Plan
 - d. Green River Flood Control Zone District/Green River Basin Program
 - e. King County Flood Hazard Reduction Plan
 - e. King County Surface Water Design Manual as adapted by Renton

Level of Service Standard in Renton

The Surface Water Utility level of service is the adopted surface water design standards which are consistent with the above referenced federal, state and local regulations as specified in the City of Renton Storm and Surface Water Drainage ordinance (RMC 4-22). New surface water management systems are designed to accommodate the future land use condition runoff based upon the city's Land Use Element and the future land use plans of neighboring jurisdictions.

The standards specified in the city-adopted portions of the 1990 King County Surface Water Design Manual require that:

1. Post-development peak rate of runoff be controlled to the pre-developed peak rate of runoff up to the 10-year design storm;
2. Water quality facility "Best Management Practices" (BMP's) such as biofiltration, wetponds, coalescing plate oil/water separators and erosion control measures are used;
3. Pipe systems be designed to convey the 25-year post-developed design storm without overflowing the system and pipe conveyance systems have adequate capacity to convey the 100-year design storm provided that the runoff is contained within defined conveyance system elements without inundating or over topping the crown of a roadway; and/or no portions of a building will be flooded; and/or if overland sheet flow occurs, it will flow through a drainage easement.
4. New drainage ditches or channels be designed to convey at least the peak runoff from the 100-year design storm without over-topping.

As a condition of SEPA, the City requires projects in areas of the City that drain to streams that flow down steep ravines to comply with the 1998 King County Surface Water Design Manual requirement and to meet the Level 2 Flow Control and Duration standard. Projects have also been required to comply with the surface water design standards in the 2001 Ecology Stormwater Management Manual for Western Washington when deemed appropriate by the City as a condition of SEPA, or because it was required as a condition of another agencies permit. It is anticipated that the City will be adopting new storm and surface water design standards within the new two to five years to be equivalent to the 2001 Ecology Stormwater Management Manual for Western Washington. The update is expected to be required as a condition of the pending Municipal Separate Storm

Sewer System National Pollution Elimination System Phase 2 storm water permit that will be issued to the City for the discharge of runoff into waters of the United States in accordance with the Federal Clean Water Act.

Projects that comply with the above-cited standards will achieve an acceptable level of service for surface water management purposes within the City of Renton.

Needed Capital Facilities and Funding Plan, 2005-2010

The capital facilities estimated to be needed to solve current surface water management problems and to prevent future surface water management problems associated with the growth projected for the first six years of the Comprehensive Plan and the proposed sources of funding are listed in Table 10-1.

The sources of revenues to be utilized by the Surface Water Utility to implement the needed capital improvements include the following:

1. Surface Water Utility rates;
2. Permit fees and system development charges;
3. Revenue bonds;
4. Private latecomers agreements;
5. Surface Water Utility Special Assessment Districts;
6. Low interest loans (state revolving funds, Public Works Trust Fund);
7. Cost-sharing interlocal agreements with adjacent jurisdictions and special districts;
8. Army Corps of Engineers - Section 205 Small Flood Control Projects Program and other financial assistance programs available to municipalities authorized by Congress;
9. USDA Soil Conservation Service (SCS) Watershed Flood Prevention and Protection Act (Public Law 566) and other SCS programs;
10. Grants from state and federal agencies such as:
 - a. Washington State Department of Ecology Centennial Clean Water Fund;
 - b. Washington State Department of Community Development Flood Control Assistance Account Program;
 - c. Washington State Salmon Recovery Funding Board and other grants that may be available from the County, State or Federal Government to improve fish habitat;
 - d. Washington State legislative appropriations approved for Special Surface Water Utility projects (Cedar River Delta project); and
11. Other unidentified federal, state and local grant programs.

As is evident in Table 10-1 on the following page, the Surface Water Utility proposed to use all or any combination of the financial sources to fund the needed capital facilities.

Table 10-1
Surface Water Utility Capital Facilities
2005-2010

Surface Water Projects	2005	2006	2007	2008	2009	2010
Wetland Mitigation Bank	50	150	1,300	-	-	
Storm System Improvement	900	1130	800	1120	1580	675
Springbrook Creek Improvements	150	850	0		100	200
Cedar River Basin Plan	-	-	130	700	-	
Green River Ecosystem Restoration	10	10	10	20	10	10
May Creek Basin Plan Implement.	275	-	-	-	-	
Lower Cedar River Sediment Management Program	275	250	250	250	600	1300
Small Drainage Problems Program	180	150	150	150	150	150
Miscellaneous & Emergency Projects	50	50	50	50	50	50
Plans and Program	110	110	110	110	110	115
Total (dollars are 1000's)	2000	2700	2800	2400	2600	2500

Sources of Funds:

Oper. Rev. Bonds	1490	2200	2300	1900	2100	2000
Licenses and Fees	500	500	500	500	500	500
Other Taxes						
Grants	10					
Loans						
Not Funded						
Total	2000	2700	2800	2400	2600	2500

PARKS, RECREATION AND OPEN SPACE

CAPITAL FACILITIES PLAN 2005-2010

Inventory of Existing Facilities

The City of Renton is the primary provider of park and recreation services within the city limits. These services include parks, indoor facilities, open space areas and recreation programs. Other suppliers that provide facilities and services include the Renton School District and several private enterprises.

Table 11-1 below is a summary of the amount of park and open space area provided by the City of Renton; provided by others within the City's Proposed Annexation Area (PAA) and the total for the overall Planning Area.

Table 11-1
Park and Open Space Areas
Summary

<u>Type of Facility</u>	<u>Renton</u>	<u>PAA</u>	<u>Planning Area Total</u>
Neighborhood Parks	92.49	22.70	115.19
Community Parks	130.36	90.00	220.36
Regional Parks	55.33	0.00	55.33
Open Space Areas	683.11	236.00	919.11
Linear Parks & Trails	91.21	0.00	91.21
Special Use Parks & Facilities	<u>190.02</u>	<u>0.00</u>	<u>190.02</u>
TOTAL	<u>1,242.52</u>	<u>348.70</u>	<u>1,591.22</u>

Tables 11-2 and 11-3 on the following pages list the individual park and open space areas that comprise the categories summarized above. Table 11-2 details Renton's Parks and Open Spaces by category and Table 11-3 lists public land in Renton's PAA. The table lists the name of each park or open space, its size in acres, and its status as of January 2001.

The locations of the individual park facilities listed in Table 11-2 are shown in Figure 11-1, which immediately follows the Table.

Table 11-2
Public Park and Open Space Areas in Renton
Detailed Listing

Park	Acres	Status
<u>Neighborhood Parks (20)</u>		
Earlington Park	1.54	Developed
Glencoe Park	.42	Developed
Heather Downs Park	4.30	Undeveloped
Jones Park	1.18	Developed
Kennydale Beach	1.76	Developed
Kennydale Lions Park	5.66	Developed
Kiwanis Park	9.00	Developed
Maplewood Park	2.20	Developed
Maplewood Roadside Park	1.00	Developed
North Highlands Park	2.64	Developed
Philip Arnold Park	10.00	Developed
Riverview Park	11.50	Developed
Sit In Park	0.50	Developed
Springbrook Watershed Park	16.00	Undeveloped
Sunset Court	0.50	Developed
Talbot Hill Reservoir	2.50	Developed
Thomas Teasdale Park	10.00	Developed
Tonkins Park	0.29	Developed
Tiffany Park	7.00	Developed
Windsor Hill Park	<u>4.50</u>	Developed
TOTAL	92.49 Acres	
<u>Community Parks (7)</u>		
Cedar River Park	23.07	Developed
Cedar River Trail Park	24.20	Developed
Highlands Park	10.40	Developed
Liberty Park	11.89	Developed
Narco Property	15.00	Undeveloped
Piazza & Gateway	0.80	Developed
Ron Regis Park	<u>45.00</u>	Developed
TOTAL	130.36 Acres	
<u>Regional Parks (1)</u>		
Gene Coulon Memorial Beach Park	<u>55.33</u>	Developed
TOTAL	55.33 Acres	
<u>Open Space Areas (10)</u>		
Black River Riparian Forest	92.00	Undeveloped
Cedar River Natural Area	237.00	Undeveloped
Cleveland Property	23.66	Undeveloped
Honey Creek	35.73	Undeveloped
Lake Street	1.00	Undeveloped
May Creek/McAskill	10.00	Undeveloped
May Creek Greenway	29.82	Undeveloped
Panther Creek Wetlands	73.00	Undeveloped

Renton Wetlands	125.00	Undeveloped
Springbrook Watershed	38.00	Undeveloped
Edlund/Korum Property	<u>17.90</u>	Undeveloped
TOTAL	683.11 Acres	

Linear Parks & Trails (7)

Burnett Linear Park	1.0 acre	Developed
Cedar River Trail	4.5 miles	Developed
Honey Creek Trail	1.0 miles	Developed
Springbrook Trail	2.0 miles	Developed
S.W. 16 th Trail	.5 miles	Developed
Garden/16 th /Houser	1.0 miles	Developed
Lake Washington Blvd	<u>1.5 miles</u>	Developed
TOTAL	10.5 Miles. 1 Acre	

Special Use Parks & Facilities (10)

Boathouse	4,242 s.f.	Developed
Carco Theatre (310 seats)	11,095 s.f.	Developed
Community Garden/Greenhouse	.46 acres	Developed
Highlands Neighborhood Center	11,906 s.f.	Developed
Maplewood Golf Course	190 acres	Developed
Maplewood Golf Course/Restaurant/Pro Shop	15,508 s.f.	Developed
Maplewood Golf Course Driving Range	11,559 s.f.	Developed
North Highlands Neighborhood Center	4,432 s.f.	Developed
Renton Community Center	36,000 s.f.	Developed
Renton Senior Activity Center	18,264 s.f.	Developed
Veterans Memorial Park	<u>0.2 acres</u>	Developed
TOTAL	181,825 Sq. Ft., 190.66 Acres	

CITY-WIDE TOTAL

1,152.95 Acres
10.5 Miles
181,825 Square Feet

Table 11-3

Public park and open space areas in Renton's Proposed Annexation Areas (PAAs)

Detailed Listing

Maplewood Community Park Site	40.0 Acres	Undeveloped
Petrovitsky Park	<u>50.0 Acres</u>	Developed
Sub-Total (Community Parks)	90.0 Acres	
Sierra Heights Park	4.7 Acres	Developed
Maplewood Park	4.8 Acres	Developed
Cascade Park	10.7 Acres	Developed
Lake Youngs Park	<u>2.5 Acres</u>	Developed
Sub-Total (Neighborhood Parks)	22.7 Acres	
May Creek Greenway	150.0 Acres	
Renton Park	19.0 Acres	
Metro Waterworks	10.0 Acres	
Maplewood Heights	5.0 Acres	
Soos Creek Greenway	<u>52.0 Acres</u>	
Sub-Total (Open Space)	236.0 Acres	
Total, Public Park and Open Space		
Within Renton's Proposed		
Annexation Areas348.7 Acres		

In addition to the park and open space areas, the city operates a number of specialized facilities as an ongoing component of the total recreational services it provides. Table 11-4 which follows lists the specialized facilities owned by the city as well as those specialized public facilities within the city limits that are owned by others.

Table 11-4
Specialized Facilities within the
Renton City Limits

Number	Facility	Comments
<u>Ballfields</u>		
City-owned:		
1	Cedar River Park	
1	Highlands Park	
1	Kennydale Lions Park	
1	Kiwanis Park	
2	Liberty Park	2 lighted
1	Maplewood Park	Small Field
1	Ron Regis	Lighted
1	Philip Arnold Park	Lighted
1	Thomas Teasdale Park	
1	Tiffany Park	
	TOTAL	11 FIELDS
Within the city limits but owned by others:		
2	Hazen High School	
2	Highlands Elementary School	Small Fields
1	Hillcrest School	Small Field
4	Honeydew Elementary School	Small Fields
3	McKnight Middle School	
4	Nelson Middle School	Small Fields
4	Renton High School	
1	Talbot Hill Elementary	
1	Tiffany Park Elementary	
	TOTAL	22 FIELDS
Number	Facility	Comments
<u>Football/Soccer Fields</u>		
City -owned:		
1	Cedar River Park	
1	Highlands Park	
1	Kiwanis Park	
1	Philip Arnold Park	1 lighted
1	Ron Regis Park	1 lighted
1	Thomas Teasdale Park	
1	Tiffany Park	
	TOTAL	7 FIELDS
Within the city limits but owned by others:		
1	Hillcrest School	
2	Honeydew Elementary School	
1	Kennydale Elementary	
1	McKnight Middle School	
1	Renton High School	
1	Renton Stadium	1 lighted
	TOTAL	7 FIELDS
<u>Tennis Courts</u>		
City-owned:		
2	Gene Coulon Memorial Beach Park	
2	Highlands Park	2 lighted
2	Kiwanis Park	

3	Liberty Park	3 lighted
1	North Highlands Park	
2	Philip Arnold Park	2 lighted
3	Talbot Hill Reservoir	
2	Tiffany Park	
	TOTAL	17 COURTS

Within the city limits but owned by others:

4	Hazen High School	
4	McKnight Middle School	
2	Nelson Middle School	
5	Renton High School	
	TOTAL	15 COURTS

Swimming Pools

Within the city limits but owned by others:

1	Hazen High School	Indoor
	TOTAL	1 POOL

Level of Service

Standards for park and recreation levels of service were first established nationally based on "Standard Demand" and have been modified at state and local levels to meet local needs. The national level of service (LOS) standards were established by committees of recreation professionals based on practical experience in the field, and are felt to be most useful in quantifiable terms, i.e. acres of park land per population served. The most recognized standards are those developed by the National Recreation Park Association (NRPA). In 1983 that organization published a report titled "Recreation, Park and Open Space Standards" that is well recognized in the recreation field.

The Park CFP establishes a 2-tiered approach: 1) an overall LOS standard based on total population and total acreage; and 2) LOS standards for individual neighborhoods and for specific types of parks and facilities within parks. The overall LOS is a gauge of whether the City is meeting overall concurrence for GMA. The second tier identifies areas where deficiencies exist so the City can target its funds to eliminate those deficiencies while still maintaining overall LOS.

The proposed LOS standard for park and open space land established for Renton in its Comprehensive Park, Recreation and Open Space plan is 18.58 acres/1,000 population. The 2004 LOS in Renton is 20.83 acres/1,000 population. The LOS within Renton's Potential Annexation Areas (PAAs) is only 6.9 acres/1,000, which reduces the 2004 overall Planning Area LOS to 14.17 acres/1,000. Continued acquisition of park and open space lands will be needed as the City's residential growth continues within its existing boundaries, and as it expands into its underserved PAA's.

The recommended service levels for Renton were developed after discussions with City staff and the Park and Recreation Advisory Committee. They are based on participation ratios by which a community can estimate in quantifiable terms the number of acres or facilities required to meet the population demand. Attaching a standard to a population variable makes it easy to forecast future needs as the population grows. The table below identifies the current overall LOS in Renton and within Renton's planning area.

Table 1

EXISTING LEVEL OF SERVICE (LOS) - OVERALL

	Park & Open Space Land	Existing Population	LOS (Acres/1,000)
City of Renton	1,153	55,360	20.83
Renton's PAA's	348.70	50,600	6.9
Total Planning Area	1,501.7	105,960	14.17

Starting below, existing service levels and recommended standards by park types within Renton are given. Each park type compares the NRPA Standard to the existing service levels and the recommended standards. This information is provided to indicate how Renton's current level of service compares to national and local standards.

Table 2

EXISTING LEVEL OF SERVICE (LOS) – BY PARK TYPE

Figures shown are in acres/1,000 population

Park and Open Space Areas

1. Neighborhood Parks

Definition:

Neighborhood parks are small park areas (usually 2-10 acres in size) utilized for passive use and unstructured play. They often contain an open space for field sports, a children's playground, a multi-purpose paved area, a picnic area and a trail system. For heavily wooded sites, the amount of active use area is substantially reduced.

NRPA Standard	1-2 Acres/1,000 Population
Existing LOS (Renton):	1.8 Acres/1,000 Population
Existing LOS (Planning Area)	1.1 Acres/1,000 Population
Recommended LOS Standard:	1.2 Acres/1,000 Population

Comments:

The recommended standard reflects the shifting emphasis on larger parks and open space recreational opportunities that cost less to maintain and operate than do neighborhood parks.

2. Community Parks

Definition:

Community parks are traditionally larger sites that can accommodate organized play and contain a wider range of facilities. They usually have sport fields or other major use facilities as the central focus of the park. In many cases, they will also serve the neighborhood park function. Community parks generally average 10-25 acres in size with a substantial portion of them devoted to active use. Sometimes, smaller sites with a singular purpose that maintain a community-wide focus can be considered community parks.

NRPA Standard:	5-8 acres/1,000 population
Existing LOS (Renton):	2.5 acres/1,000 population
Existing LOS (Planning Area):	2.1 acres/1,000 population
Recommended LOS Standard:	2.5 acres/1,000 population

Comments:

The low existing ratio reflects a past emphasis within Renton on neighborhood parks. While the recommended standard is well below the NRPA standard, it represents a shifting emphasis to community parks.

3. Regional Parks

Definition:

Regional parks are large park areas that serve geographical areas that stretch beyond the community. They may serve a single purpose or offer a wide range of facilities and activities. In many cases they also contain large areas of undeveloped open space. Many regional parks are acquired because of unique features found or developed on the site.

NRPA Standard:	5-10 acres/1,000 population
Existing LOS (Renton:	1.1 acres/1,000 population
Existing LOS (Planning Area):	0.5 acres/1,000 population
Recommended Standard:	1.08 acres/1,000 population

Comments:

Renton has the potential for developing another regional park located in the Cedar River corridor. The recommended standard of 1.08 acres per 1,000 population recognizes the potential for creating a Cedar River Regional Park consisting of the following Special Use Parks: Cedar River Park, Maplewood Roadside Park, Maplewood Golf Course, and the Cedar River Property.

4. Open Space Areas

Definition:

This type of park area is defined as general open space, trail systems, and other undeveloped natural areas that includes stream corridors, ravines, easements, steep hillsides or wetlands. Often they are acquired to protect an environmentally sensitive area or wildlife habitats. In other cases they may be drainage corridors or heavily wooded areas. Sometimes trail systems are found in these areas.

Existing LOS (Renton)	13 acres/1,000 Population
Existing LOS (Planning Area):	8.9 acres/1,000 Population
Recommended LOS Standard:	12.7 acres/1,000 Population

Comments:

The recommended LOS Standard of 12.7 acres per 1,000 population represents an increase over the present situation, as several additional open space systems have been identified for preservation. A majority of this type of land is wetlands, steep slopes, or otherwise not suitable for recreational development.

5. Linear Parks

Definition:

Linear parks are open space areas, landscaped areas, trail systems and other land that generally follow stream corridors, ravines or other elongated features, such as a street, railroad or power line easement. This type of park area usually consists of open space with development being very limited. Trail systems are often a part of this type of area.

Existing LOS (Renton):	1.9 acres/1,000 Population
Existing LOS (Planning Area):	0.9 acres/1,000 Population
Recommended Standard:	0.3 acres/1,000 Population

Comments:

The majority of linear park land is found along the banks of the Cedar River and Honey Creek. There are other opportunities for linear parks utilizing utility corridors.

6. Special Use Parks and Facilities

Definition:

Specialized parks and facilities include areas that generally restrict public access to certain times of the day or to specific recreational activities. The golf course and major structures are included in this category.

Existing LOS (Renton):	3.7 acres/1,000 Population
Existing LOS (Planning Area):	1.8 acres/1,000 Population
Recommended Standards:	0.8 acres/1,000 Population

7. Total Park Land

Presently, Renton has 1,197.85 acres of total park land within the city boundaries. Together with another 348.7 acres of public park and open space land within Renton's PAAs (Potential Annexation Areas), the total amount of park and open space land within Renton's planning area is 1,546.55 acres.

NRPA Standard:	15-20 acres/1,000 Population
Existing LOS (Renton):	20.83 acres/1,000 Population
Existing LOS (Planning Area):	14.60 acres/1,000 Population
Recommended LOS Standard:	18.58 acres/1,000 Population

Comments:

While the recommended standard of 18.58 acres per 1,000 population seems high, most of the acreage is in the open space category. Most of this land is undevelopable as steep hillsides, wetlands or environmentally sensitive areas.

Specialized Facilities

Below are the recommended levels of service for specialized recreation facilities. In addition to the NRPA standard and the existing facility ratio, an estimate of the participation level in Renton compared to the average for the Pacific Northwest is also provided. The existing inventory includes city-owned facilities as well as those facilities within the city limits owned by other public entities.

1. Ballfields (Includes baseball and softball fields)

NRPA Standard:	1 field per 2,500 population
Existing Participation:	Average
Existing Inventory:	20 fields *
Existing Facility Ratio:	.9 field per 2,500 population
Recommended Standard:	1 field per 2,500 population

* Small fields were excluded for purposes of evaluation.

2. Football/Soccer Fields

NRPA Standard:	1 field per 10,000 population
Existing Participation:	75 % below average
Existing Inventory:	26 fields
Existing Facility Ratio:	.9 field per 3,000 population
Recommended Standard:	1 field per 3,000 population

Comments

Because of the extremely high existing facility ratio and the below average participation rate, the recommended standard--while substantially above the NRPA standard—is roughly the same as the existing facility ratio.

3. Tennis Courts

NRPA Standard:	1 court per 2,000 population
Existing Participation:	15 % below average
Existing Inventory:	32 courts
Existing Facility Ratio:	.9 court per 2,500 population
Recommended Standard:	1 court per 2,500 population

Comments

Based on the substantially above average existing facility ratio, the recommended standard is almost equivalent to the existing facility ratio.

4. Swimming Pools (indoor)

NRPA Standard:	1 pool per 20,000 population
----------------	------------------------------

Existing Participation:	Average
Existing Inventory:	1 indoor pool
Existing Facility Ratio:	.4 per 40,000 population
Recommended Standard:	1 pool per 40,000 population

Comments

5. Walking Trails

Existing Participation:	16% above average
Existing Inventory:	7.5 miles (off-street)
Existing Facility Ratio:	.15 miles per 1,000 population
Recommended Standard:	.20 miles per 1,000 population

Comments

The recommended standard reflects a strong local interest in walking trails and the fact that the city directed its efforts to other areas until recent years.

Needed Capital Facilities and Funding Plan--, 2005-2010

Table 11-4 on the following page shows the projects which may need to be begun over the next six years to achieve the recommended level of service standards if the forecast growth -- and therefore, demand -- occurs. The Table also includes potential funding sources for each project, where known.

**Table 11 - 4
Parks Capital Facilities
2005 - 2010**

Park Projects	2005	2006	2007	2008	2009	2010
Black River Riparian Forest	-	-	-	85	75	
Cedar River Ball Field Lighting	200	-	-	-	-	
Cedar River Trail Extension	1,000	1,000	-	-	-	
Regis Park Athletic Field Expansion		500	600	-	-	
Heather Downs Development.	50	750	-	-	-	
Maplewood Community Park Dev.		500	3,000	-	3,000	
New Maintenance Facility	5,500	3,000	0	-	-	
Parks Contingency Plan		-	-	-	-	
North Highlands Community Center	150	2,000	-	-	-	
Pavilion Improvement	-	-	-	-	-	
Grant Matching Fund	200	200	200	200	200	
Carr Road Acquisition						
Henry Moses Aquatic Center		1,000	500	1,000	500	
Cedar River Trail Extension						
Golf Course						
Veteran's Memorial Park						
East Renton Plateau Acquisition						2,100
North Highland Redevelopment				1,000		600
TOTAL	7,100	8,950	4,300	2,285	3,775	2,700

This Section to Be Developed

General Fund	\$2,100	\$3,640	1,720	485	815	300
Licenses and Fees*-User Fees	260	260	280		660	
Other Taxes	1,000	1,300	1,300	1,300	1,300	1,300
Grants	750	750	1,000	500	1,000	1,100
Loans	3,000	3,000				
Not Funded						
TOTAL	\$7,100	\$8,950	4,300	2,285	3,775	2,700

***Includes Parks Mitigation Fees in 2001 and Golf Course fees to fund Golf Course Capital Improvements.**

PUBLIC SAFETY CAPITAL FACILITIES PLAN

2005-2010

Inventory of Existing Facilities

The City of Renton provides police, municipal court, and jail services and facilities as part of its public safety responsibilities. Currently, all of these services and facilities are located on the city hall campus.

Level of Service

The police department has a total of 128 employees. Based on Renton's 2004 population of 54,900, the current level of service of police department employees to population is nearly 2.33 employees per 1,000 residents. The current level of service for officers is nearly 1.6 officers per 1,000 residents.

With the population of Renton projected to grow to over 61,694 residents by the year 2010, the number of police department employees will have to increase to 140 to maintain the current level of service. It is also projected by the police department that with an increase in the general population would come an increase in the number of class I, II, and III crimes and a related increase in the number of court cases and jail days and in the size of the average daily jail population. To maintain the current level of service for both the municipal court and the jail would require an increase in the staff at those facilities.

Needed Capital Facilities and Funding Plan, 2005-2010

In 1999 the mayors of the five member cities of Valley Communication Board (Auburn, Federal Way, Kent, Renton, and Tukwila) agreed to build a new 911 Center at a cost of \$15,405,519. The Board has been collecting a surcharge on calls for the past five years for construction of a new facility. The net costs, with an assumption that a new dispatch system is not needed, will be \$12,571,343. Each member city will be responsible for approximately \$2.5 million of the construction costs. As of September 1999, the estimated annual costs of the debt will be approximately \$300,000 over 20 years. In the Capital Facilities Plan this cost is divided evenly between the Police and Fire Departments.

Table 12-1

Public Safety Projects	2005	2006	2007	2008	2009	2010
Valley Communications Center*	\$150	\$150	\$150			\$150
Total	\$150	\$150	\$150			\$150

*Cost shown in 2001-2005 Capital Facilities Plan is split between the Public Safety and Fire Functions.

Source of Funds	2005	2006	2007	2008	2009	2010
Licenses and Fees	\$150	\$150	\$150			\$150
Total	\$150	\$150	\$150			\$150

FIRE CAPITAL FACILITIES PLAN

2005-2010

Inventory of Existing Facilities

The Renton Fire Department provides fire protection services from five locations: Station 11 which is the main fire station across from Historic City Hall and serves the central part of the city; Station 12 which is located in Renton Highlands and serves the north and east portions of the city; and Station 13 which is located in the Talbot Hill area and serves the southeast portion of the city. Station 14 is located at Lind & S. 19th Street and serves the South portion of Renton. Additionally, King County Fire District 25 operationally is part of the Renton fire protection system; it serves the east portion of the city as well as portions of King County. Figure 13-1 on the following page shows the locations of the fire stations.

Currently Station 11 is staffed by 9 personnel and is equipped with one engine company, one ladder company, one aid car and one command car. Station 12 is staffed by 5 personnel and is equipped with one engine company and one aid car. Station 13 is staffed by three personnel and one engine company and one aid unit. Station 14 is staffed by three personnel and equipped with an engine and 1 aid unit.

The City's water system is also a critical component of fire protection service. Currently all areas of the city are served by the city water system.

Level of Service

Historically, level of service for fire suppression has been measured in a variety of qualitative and quantitative terms. However, in the city's Fire Department Master Plan (1987) the primary level of service criteria were response time and fire flow.

Response time is an important criterion for level of service because there is a direct relationship between how long a fire burns and the temperatures created by the fire. Eventually temperatures become so high that "flashover" occurs, a process in which all combustible material in a room or building ignites simultaneously. Reaching a fire before flashover occurs is an important consideration in fire suppression. Studies have shown that under normal dispatching procedures fire crews have about four to six minutes to reach a fire before flashover occurs.

Fire flow is the second criterion for measuring the level of service for fire suppression. Fire flow refers to the amount of water that is available to spray on a fire and extinguish it. Understandably, water is an essential element for fire suppression, and the hotter a fire, the more water that must be available to extinguish it. Determining what is adequate fire flow depends upon a building's type of construction, floor area, and use. For example, adequate fire flow in the city's water system for a single-family wood frame house is 1,000 gallons per minute (gpm) whereas adequate fire flow for a shopping center or an industrial park is approximately 4,500 gpm.

The third aspect of establishing level of service is personnel. Having trained firefighters in sufficient numbers is crucial to putting out a fire safely and efficiently. The number and training of firefighters also must fit with the department's strategic or tactical approach to fighting fires. The Renton fire department uses an aggressive attack strategy as opposed to a defensive approach strategy.

In its Fire Department Master Plan, the City established the following standards for level of service:

1. Acceptable response time is defined as having the first responding units arrive on the fire scene in five minutes or less.
2. Acceptable response time is defined as having the second responding units arrive on the fire scene in ten minutes or less.
3. Acceptable fire flow is defined as having water available to all parts of the city in sufficient quantity and pressure to extinguish the worst-case fire in an existing or projected land use.
4. Acceptable personnel is defined as having five firefighters on site in first response and ten firefighters on site in second response.
5. Acceptable personnel is also defined as having sufficient personnel available through mutual aid and automatic response agreements with neighboring jurisdictions to efficiently and successfully extinguish the larger and more complex fires in residential, commercial, institutional and industrial buildings.

Needed Capital Facilities and Funding Plan, –2005-2010

With the exception of a few isolated small areas of the city, the "five firefighters in five minutes" level of service standard is being met. With regard to the "ten firefighters in ten minutes" level of service standard, this standard is being met in virtually the entire city.

Similarly, the adequate fire flow level of service standard is being met city-wide. Generally, fire flows are adequate throughout the city, a long-range water system plan is being implemented to upgrade the few low fire flow areas, and development standards and review procedures are in place which require that necessary fire suppression measures are made available for all new construction.

Given the population and employment growth projected for the year 2010, it is anticipated that some actions may be needed over the next six years to maintain the response time level of service standards.

In the east Renton area the agreement with Fire District 25 whereby the city has assumed operational control of that facility coupled with Station 12 and the water system plan for the area should assure that both response time and fire flow standards will be maintained.

In the Kennydale area a new station 15 will be constructed over the next six years. The station will be staffed with three firefighters, seven days a week. This means an additional fifteen firefighters along with the purchase of equipment. The total project includes the purchase of land, design, construction, hiring personnel, and purchase of equipment. Presently the northerly portion of the area is within the ten-minute response time standard but outside of the five-minute response time standard for Station 12. As pointed out in the Fire Department Master Plan, a new station 15 closer to I-405 and 44th would provide five-minute response time coverage to the entire area.

Over the next six years, some single family and multi-family growth is projected for the Kennydale/Highlands area, as is some employment growth. This growth would increase somewhat the importance of providing improved service to the area in the near term. Given the residential and employment growth projected for the area after the year 2006, the importance of taking actions to improve the five-minute response time coverage increase substantially during that period. The solution recommended in the Fire Master Plan was to relocate Station 12 further to the east. This was accomplished in 2004. In the next six-year planning period, the City will build Station 15 to better serve the growing Highlands area. This project includes purchasing land, design, and construction. The City also anticipated improvements to Valley Communications Facilities over the next six years.

Station 14 was built in the Valley industrial area to help handle the projected employment and multi-family growth for the area. In addition, there is still a need for a new facility for Station 13 due to its physical limitations in terms of its ability to accommodate the necessary equipment and personnel to maintain the current level of service standards as growth occurs. Station 13 was built as a temporary facility, until a decision was made whether to build a new station or collocate with Fire District 40. With the decision not to collocate a station, the need for a new facility is apparent. The project includes design and construction only.

Table 13-1
Fire Capital Facilities
2005 - 2010

Fire Projects	2005	2006	2007	2008	2009	2010
Station 13	990	3,500	-	-	-	
Station 15	350	4,500	-	-	-	
Valley Communications Center	150	150	150			150
Total	1,490	8,150	150			150

This section to be developed

Sources of Funds:

General Fund	1,340	800				
Licenses and Fees	150	150	150			150
Bonds						
Fire Mitigation Fees						
Total	1,490	8,150	150			150

Figure 13-1
Existing and Proposed Fire Stations

ECONOMIC DEVELOPMENT/ADMINISTRATION CAPITAL FACILITIES PLAN

2005 - 2010

The Neighborhood Grant Program provides \$50,000 to be distributed in small matching grants to organized associations that from recognized geographic neighborhoods in Renton. The grant projects must be a benefit to the public, create physical improvements, build and enhance a neighborhood feature and be within Renton City limits.

Funding for infrastructure implementation is provided for the Highlands Subarea Plan and the South Lake Washington Redevelopment Area. New development in these two areas will require additional transportation and utility investments needed to stimulate redevelopment.

Table 14-1
Economic Development/Administration Facilities
2005 - 2010

Economic Development Projects	2005	2006	2007	2008	2009	2010*
Neighborhood Grants	\$50	\$50	\$50	\$50	\$50	\$50
Highlands Subarea Plan	75					
South Lake Washington Redevelopment	50					
Total	\$175	\$50	\$50	\$50	\$50	\$50

Sources of Funds:

General Fund	\$175	\$50	\$50	\$50	\$50	\$50
Total	\$175	\$50	\$50	\$50	\$50	\$50